

Emerson Bridge Gets Global Cable Experts

The construction of the Bill Emerson Memorial Bridge has brought the best from many fields to Cape Girardeau. Nicolas Raudin and Pavel Pavlov may have come farther than most. Raudin and Pavlov work for Freyssinet, a civil engineering firm headquartered in France.

Freyssinet is a subcontractor hired to lend MoDOT and bridge contractor Traylor Brothers its expertise on the stay cable and post-tensioning process. The company's namesake French engineer Eugene Freyssinet is the father of pre-stressed concrete.

"For each project, we provide technical assistance, equipment and training needed for the cable installation," said Raudin.

Post-tensioning is necessary to

strengthen the concrete once the cables begin to pull on the piers. Steel strands are looped through the tower legs and filled with grout, forcing the concrete to compress and get stronger.



L to R: Pavel Pavlov and Nicolas Raudin of Freyssinet.

Raudin and Pavlov have been in Cape since January and will stay until the bridge is completed. Raudin is an engineer from the company's main office in France and Pavlov is a project engineer from Freyssinet's U.S. office in

Virginia. Before the Emerson Bridge, Raudin worked on cable-stay bridges in Hong Kong, Vietnam and Egypt. Pavlov recently worked on a cable-stay bridge in Boston.

"Freyssinet has assisted in more than 50 cable-stay bridges around the world," said Pavlov. "We may have five-to-six cable-stay bridge projects next year."

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The Construction Update

The Emerson Bridge construction is making progress and getting closer to completion every day. Here's the latest update on construction.

Pier 2--Work continues with the girders being installed and deck panels being placed. Stay cable work progresses, with seven sets of stays in place.

Pier 3--Concrete work on the pier tower continues. Each tower leg has a few more pours to go.

Post tensioning has begun. Post



Cable and deck being installed on Pier 2.

tensioning is a process of placing steel strands through the tower legs to support the tower once cables are installed. The process of putting up the cables and deck panels is expected to begin on Pier 3 in about a month.

Pier 4--Big news since the last edition of *The Beacon*, the pier's caisson was sunk to bedrock.

An 18-hour concrete pour for the pier's distribution cap wrapped up in October. The distribution cap

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Construction Update Continued

is roughly 5.8 million pounds of concrete and basically caps the top of the caisson.

Approximately 15 million pounds of concrete were poured into the caisson in September to begin the foundation for Pier 4 near the Illinois shore.

Work is progressing with the stem, or pier walls



Cable work on Pier 2.

and columns. Two stem pours have been made, the second of which saw Pier 4 emerge above the river.

Three more pours will follow, about one every month. The pier work will conclude with the final pour which will be topped by the pier cap, on which the girders will eventually be placed.

Approaches--

Work has begun on the bridge approach on the Illinois side. Currently, the



Pre-poured concrete panels are placed to create the bridge deck on Pier 2.

roadway deck panels are being set in place.

Big Day Gets Closer; Committee Plans

The countdown is on and in about a year (mother nature permitting), we should all be driving on the new Bill Emerson Memorial Bridge.

To commemorate such a large project and celebrate the enormous improvements its completion will bring, local officials are planning an event to honor the occasion.

Cape Girardeau Chamber President John Mehner is chairing a steering committee of local leaders. The group held its second meeting in November to discuss ideas.

"We basically want to outline some events to



celebrate the bridge's opening," said Mehner. "Then, we want to ask for more volunteers to help with planning so that this is an event in which everyone in Cape Girardeau can play a part."

Weather will also play a role in whatever events mark the grand opening.

"We realize the bridge may open at a time when an outdoor celebration may not be the best idea," said Mehner. "We hope the weather will cooperate with construction for the next year and that nothing will get in the way of this great occasion."

An In Depth Look:

Kevin Plott, MoDOT Intermediate Construction Inspector



Kevin Plott graduated from Southern Illinois University in December

1999 and began working at MoDOT in January 2000. His three years at MoDOT have made him part of the largest transportation project ongoing in Southeast Missouri--that's not a bad way to begin your career.

Plott is an intermediate construction inspector for MoDOT. He inspects the work performed by contractors for the Bill Emerson Memorial Bridge project.

"Projects of this size aren't very common," Plott said. "This is probably going to be a once in a lifetime experience."

Plott said the cable-stay design and the bridge foundation were pretty unique features of the

bridge that make for an interesting construction process, but his favorite part?

"Being able to see the progress of the bridge from the foundation work in the beginning to the stay cable and bridge deck installation at the end of the project," Plott said.

When that progress is complete, Southeast Missouri will have a unique structure that will provide a big improvement in

transportation across the Mississippi River at Cape Girardeau. For Plott, what's up next may not be quite as exciting but he said he realizes all good things must come to an end.

"This was my first project, so it will be quite a change to work on a normal MoDOT project. I think everyone is looking forward to the day that we finish the bridge and open it to the public," he said.



The Bridge *Beat*

with New Cape Convention & Visitors Bureau Director



Chuck Martin may be the new director of the Cape Girardeau Convention and Visitors Bureau, but he isn't new to Cape Girardeau. Martin grew up in Southern Illinois but has made his home in the Cape area since 1973.

He's excited to use his business administration, marketing and fundraising background to improve the CVB.

Martin said he's also excited about what the Bill Emerson Memorial Bridge will mean for Cape Girardeau.

"The bridge is going to be a beautiful landmark, especially with the lighting. I imagine people will be going to the river just to see the bridge at night," he said. "It has a great aesthetic element in addition to being a transporta-

tion improvement."

Speaking of transportation improvements, Martin said the new bridge will benefit Cape in more ways than just becoming a landmark.

"MoDOT has done a wonderful job maintaining the old bridge, but having a modern, four-lane bridge will bring a lot of people to the Cape market," he said.

Martin is also pleased about work the city is doing to prepare for the bridge.

"We're all excited about the Fountain Street extension," he said. "We'll have a great bridge that provides access to Interstate 55 and western Cape and the Fountain extension will provide an outlet to the downtown area as well.

Martin said he's happy to be aboard and anxious for the Emerson Bridge to add this new element to Cape Girardeau.

Emerson Bridge Key In Seismic Studies

The cable-stay design of the Bill Emerson Memorial Bridge will make it a landmark in the area, but the bridge will have other features that will make it one-of-a-kind.

MoDOT is partnering with many organizations including the US Geological Survey to equip the Emerson Bridge with instruments to collect information in the event of

an earthquake.

Most data about bridges and earthquakes currently comes from research in other parts of the nation or the world. The Emerson Bridge will be the only one in the Midwest with the tools to measure an earthquake's effect on a structure. That research can be used for future designs for regional locations.

The USGS developed

the plan and will assist MoDOT with the installation, maintenance and research.

Instruments are being included in the bridge's foundation, deck and the two cable towers. The bridge's performance will be measured during strong motion events such as an earthquake. The instrumentation will provide real-time monitoring of

these events and will alert MoDOT or the USGS of the severity of earthquake events.

In addition to seismic study, MoDOT is also considering additional instrumentation to monitor the cables motion during wind or rain. That research would provide significant design information for future cable-stay bridges in the region.

Experts Continued

The company employs nearly 2,800 people with projects on nearly every continent including bridges, dams, skyscrapers and many other structures.

With such a global focus, the pair are finding Cape Girardeau a nice, quiet place to live.

"We travel all over the world," said Raudin. "We miss home, but it's part of the job to go somewhere and stay for six-months to a couple of years. When you work seven days a week, it doesn't really matter where you are."

Emerson Bridge Fun Fact For Kids

The 243,688,500 pounds of concrete used to build the bridge is equal to the weight of 902,550 professional wrestlers. The concrete is smoothed flat and provides a surface on which the cars drive.



The Beacon

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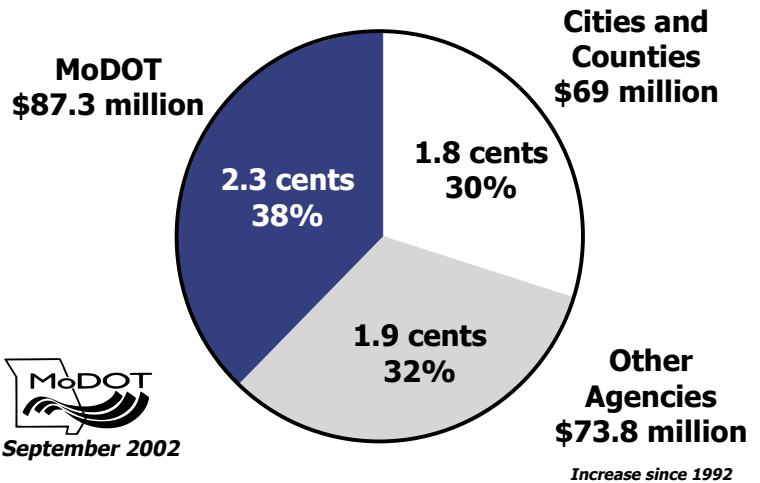
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Funding Facts

In 1992, the Missouri Legislature passed a six-cent gas tax increase. Below is the breakdown of the distribution of that six cents in fiscal year 2001 (July 2000-June 2001).

Total -- \$230.1 million



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